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XXI.—*Further Notes on the Fabrician Types of* Heteromera (*Coleoptera*) *in the Banks Collection.* By K. G. Blair, B.Sc., F.E.S.

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In the 'Annals' for May 1914 (ser. 8, vol. xiii. pp. 482–490) I published notes on the Fabrician types of Tenebrionidæ in the above collection. The present paper supplements these with notes on the types belonging to other families of the Heteromerous series.

A few species not included in the Heteromera that were placed by Fabricius in the genus *Cistela* are also noted, with a brief indication of their true systematic position. Where no comment is added the species may be taken as being generally well known and correctly identified.

Family Alleculidæ (*Cistelidæ*).

1. *Lobopoda lurida.*

Helops luridus, Fab. Syst. Ent. 1775, p. 258. Brazilia.

I have not been able to identify this with any other described species, and as the name appears to have been dropped from recent catalogues a redescription of the species may be of value:—

Elongate-ovate, moderately nitid, dark reddish brown

with a not very dense clothing of depressed fulvous hairs; eyes separated by a space about equal to the length of the second joint of the antennæ; thorax strongly transverse, with a shallow median impression gradually evanescent in front, and a moderately strong basal impression on each side, the surface rather closely but not deeply punctured; elytra gradually narrowed from just behind the shoulders, deeply punctate-striate, the punctures much smaller behind the middle, intervals convex, finely not very densely asperately punctate. Length 10 mm.

The species is closely allied to *L. puncticollis*, Champ., from Guatemala, from which it differs in having the eyes less closely approximate and the punctures of the elytral striæ coarser. The British Museum possesses specimens from Pernambuco, Bahia, Espirito Santo, and Rio de Janeiro.

2. *Homotrysis rufipes.*

Helops rufipes, Fab. Syst. Ent. p. 258. Nova Hollandia.
Homotrysis (*Allecula*) *angusticollis*, Boh. Res. Eugén. 1858, p. 100.

The synonymy has been established by Mr. H. J. Carter on specimens compared with the type of *Helops rufipes*, Fabr. This is another name that seems to have disappeared from recent catalogues.

3. *Lystronychus equestris.*

Helops equestris, Fab. Syst. Ent. p. 257. Brazil.

The type is defective, wanting the head and thorax, but the elytra of this well-known species are amply distinctive.

4. *Heliotaurus ruficollis.*

Cistela ruficollis, Fab. Spec. Ins. i. 1781, p. 147. Lusitania.
? *Heliotaurus sanguinicollis*, Reitt. Verh. Nat. Ver. Brünn. xlv. 1906, p. 143.

The type is a ♀, and is rather doubtfully identical with *H. ruficollis* of Reitter's 'Bestimmungstabellen.' The elytral epipleura are not turned upwards, but are vertical as in *H. sanguinicollis*, Reitt.

5. *Prionychus ater.*

Helops ater, Fab. Syst. Ent. 1775, p. 258. Lipsia.

No collection is definitely specified as containing the type, but the specimen in the Banks Collection bears a label with the above reference, and may, in default of any individual with a better claim, be taken as the type.

Family **Lagriidæ.**

6. *Lagria glabrata* (*hirta*, L.).

Lagria glabrata, Fab. Syst. Ent. p. 125. Anglia.

Though stated to be in Mus. Dom. Banks, the type is not now to be found in this Collection.

Olivier expresses doubt whether his *L. glabrata* (Encycl. Méth. vii. 1792, p. 446) is identical with that of Fabricus, a fact that suggests that the type was even then not to be found in the Banks Collection, to which this author is known to have had access. Seidlitz (Naturgesch. der Insekt. Deutschl. v. 2, 1898, p. 350) considered, no doubt correctly, that *L. glabrata*, Fab., was merely a rubbed specimen of *L. hirta*, L., and Borchmann in Junk's Catalogue places it as a synonym of this species.

In any case, the name *glabrata* is occupied in the genus *Lagria* from 1775, and is consequently not available for Olivier's species (1792). The name of the latter should, therefore, be changed to *L. rugosula*, Rosenh., its first available synonym.

7. *Lagria villosa.*

Lagria villosa, Fab. Spec. Ins. i. p. 160. Cap. bon. Spei.

A well-known species widely distributed in Africa.

8. *Lagria tomentosa.*

Lagria tomentosa, Fab. Syst. Ent. 1775, p. 125. Nova Hollandia.
Lagria pulchrivaria, Lea, Trans. Roy. Soc. S. Austral. xli. 1917, p. 175.

The type is defective, with the basal joint of only one antenna left. It is apparently a ♀ of the species recently described by Lea as *L. pulchrivaria* from Queensland and New South Wales.

Mr. Champion has long since pointed out (Trans. Ent. Soc. 1895, p. 229) that the species from Western Australia, commonly known as *L. tomentosa*, Fab. (*L. æneoviolacea*, Champ.), does not agree with this type.

9. *Eutrapela elongata.*

Crioceris elongata, Fab. Syst. Ins. i. 1781, p. 156. Cap. bon. Spei.
Crioceris elongata, Fab. Ent. Syst. i. 2, 1792, p. 11.
Helodes elongata, Fab. Syst. Eleuth. i. 1801, p. 470.
Chrysomela unifasciata, De Geer, Mém. vii. 1778, p. 664, pl. 49, figs. 18–19.
Helodes porrecta, Fab. Syst. Eleuth. i. 1801, p. 470.
Eutrapela vittata, Illig. (Dej. Cat. 1837).

Reference to Fabricius's earliest description is omitted from both Gemminger and Harold's Catalogue and that of Borchmann, so that the name is made to date from 1792.

The species is generally erroneously determined in collections. The type is a ♂, with greenish-black thorax, legs, and antennæ. The ♀, with these parts testaceous, was later described by Fabricius as *H. porrecta*, which is identical with *Chrysomela unifasciata*, De Geer.

The name *E. elongata*, Fab., must therefore be sunk as a synonym of *E. unifasciata*, De G., and for the species usually known by it a new name must be found. *E. longa*, Gmel. (1788), which appears in the Catalogues as a synonym, is probably only a *lapsus calami*, and in any case the description refers definitely to the Fabrician species, so that the name is not available for *E. elongata*, auctt. (nec Fab.).

From specimens now in the British Museum from Dejean's Collection it is evident that the mistake had arisen at least as early as his Catalogue (1837), and I now propose the name *dejeani*, nom. nov., for the species that appears there and in later Catalogues as *E. elongata*, Fab.

Both species are black with a greenish-metallic tint and a broad flavous vitta along the disc of each elytron* ; they are readily distinguished as follows :—

Vitta embracing the 5th, 6th, and 7th intervals, but not extending beyond them except near the base, where it is suddenly expanded to reach the margin; punctures of median row on each interval as large as those of the striæ. —*dejeani*, nom. nov. [=*elongata*, auctt. (nec Fab.)].

Vitta embracing the whole of the 4th interval and encroaching slightly upon the 3rd and 5th; punctures of median rows on each interval distinctly smaller than those of the striæ.—*unifasciata*, De G. [=*elongata*, F.=*longa*, Gmel.=*porrecta*, Fab.=*vittata*, Illig. (Dej. Cat.)].

Family **Melandryidæ**.

10. *Stenotrachelus æneus*.

Lagria ænea, Fab. Syst. Ent. p. 124. In Insulis Americæ.

The habitat is evidently erroneous, the species being holarctic in distribution.

* N.B.—*E. unifasciata*, De G., is sexually dimorphic, as noted above.

11. *Melandrya serrata* (*caraboides*, L.).

Helops serratus, Fab. Syst. Ent. p. 257. Anglia.

No collection is specified as containing the type, but this individual may provisionally be taken as such. Its identity with "*Chrysomela*" *caraboides*, L., was recognised by Fabricius in his later works.

Family Œdemeridæ.

12. *Thelyphassa lineata.*

Lagria lineata, Fab. Syst. Ent. p. 124. Nova Zelandia.
Dryops lineata, Fab. Syst. Eleuth. ii. p. 68.
Selenopselaphus lineatus, Fab., Gemm. & Har. Cat. p. 2168.
Sessinia lineata, Fab., Schenklin in Junk's Coleopt. Cat. pars 65, 1915, p. 33.

The type is a ♀. It is curious that Pascoe, when characterising the genus *Thelyphassa*, should not have recognised the close affinity between this species and his *T. diaphana*. He had himself, only six months previously, removed it from *Selenopalpus* (*Selenopselaphus*) to *Sessinia*.

It may be noted that *S. longicornis*, Broun, and *S. strigipennis*, White, should also be placed in *Thelyphassa*.

13. *Selenopalpus cyaneus.*

Lagria cyanea, Fab. Syst. Ent. p. 125. Nova Hollandia.
Dryops cyanea, Fab. Syst. Eleuth. ii. p. 68.
Selenopselaphus cyaneus, Fab., Gemm. & Har. Cat. p. 2168.
Selenopalpus chalybeus, White (♂), Voy. 'Erebus' & 'Terror,' Ins. 1846, p. 13. New Zealand.
Selenopalpus subviridis, White (♀), *loc. cit.*

The type of *S. cyaneus*, Fab., is a ♂ and is identical with *S. chalybeus*, White, the type of which is also in the British Museum. *S. subviridis*, White, is nothing but the ♀ of the same species. The locality given by Fabricius is evidently erroneous.

14. *Sessinia livida.*

Lagria livida, Fab. Syst. Ent. p. 124. Otaheiti.

The species is well known in collections, and is the type of Pascoe's genus *Sessinia*

15. *Dohrnia tristis.*

Necydalis tristis, Fab. Mant. Ins. i. 1787, p. 170. In terra Diemenii.
Œdemera tristis, Fab. Oliv. Ent. iii. 1795, no. 50, p. 12, pl. ii. fig. 13.
Dohrnia mirabilis, Newm. Zoologist, ix. 1851, App., p. 133.
Ithaca authina, Olliff, Proc. Linn. Soc. N. S. Wales, (2) ii. 1887, p. 154.

Unfortunately all that remains of the type is the abdomen attached to the pin. The description, in conjunction with Olivier's figure, leaves no doubt that the insect was the ♀ of the species better known as *Dohrnia mirabilis*, Newm., and an examination of the abdomen makes this identity certain. Olliff evidently did not know Newman's insect, but his description is so full and detailed as to leave the synonymy beyond question.

Family Meloidæ.

16. *Epicauta dubia.*

Lytta dubia, Fab. Spec. Ins. i. 1781, p. 329. Sibiria.

17. *Epicauta marginata* (*cinerea*, Forst.).

Lytta marginata, Fab. Syst. Ent. 1775, p. 260. *Hab.* C. B. S.

Fabricius again gives a wrong locality, and does not cite the collection from which the type is taken. Olivier states (Ent. iii. p. 46. no. 16) that it is "du cabinet de M. Banks." The Banksian insect bears the label "Sp. Ins. no. 5," at which reference the species is synonymised with *Meloe cinereus*, Forst., a well-known N.-American species.

18. *Lytta nitidula.*

Lytta nitidula, Fab. Syst. Ent. 1775, App. p. 826. Anglia.

The locality is corrected in Ent. Syst. i. 2, p. 84, to Cap. Bon. Spei. The collection containing the type is not specified, but Olivier states that it is in the Banks Collection. The reference is incorrectly given in the Catalogues as p. 820.

19. *Euzonitis quadripunctata.*

Mylabris 4-punctata, Fab. Mant. i. 1787, p. 217. Russia.

The reference is incorrectly given in recent Catalogues as Syst. Eleuth. ii. 1801, p. 84.

20. *Zonitis angulata.*

Cantharis angulata, Fab. Mant. i. p. 168. Insula Amsterdam.
Zonitis angulifera, Blanch. Voy. Pôle Sud, Ins. iv. 1853, p. 191, pl. xii. figs. 17, 18.

The type agrees perfectly with specimens in the British Museum from Vavao and the Tonga Islands (*Z. angulifera*, Blanch.). Amsterdam Is. is in the southern Indian Ocean, so that the Fabrician locality again appears to be erroneous.

21. *Zonitis testacea.*

Mylabris testacea, Fab. Spec. Ins. i. 1781, p. 331. Sibiria.
Zonitis præusta, Fab. Ent. Syst. i. 2, 1792, p. 48. Italia.
Zonitis flava, Fab. Syst. Ent. 1775, p. 127. In Oriente.
Zonitis flava, Fab. Ent. Syst. i. 2, 1792, p. 49.

This species was three times described by Fabricius himself. The synonymy of the first two names given above was recognized by him, but *Z. flava*, described from the collection of Prof. Forskahl, was retained as a distinct species in his latest work (Syst. Eleuth. ii. 1801, p. 24).

The reference to *Z. flava* is given incorrectly in the Catalogues as Ent. Syst. ii. (*sic*!) 1792, p. 49, but the name really originates from 1775, and thus takes precedence as the specific name. This precedence is recognized by Reitter (Fauna Germ. iii. 1911, p. 397), but the name is not adopted by Borchmann in his recent Catalogue of this family (1917).

22. *Cissites testacea.*

Lymexylon testaceum, Fab. Spec. Ins. i. 1781, p. 256. Habitat ——.
Horia testacea, Fab., Oliv. Ent. iii. 1795, no. 53 *bis*, pl. i. fig. 2 *a* (♀).
Horia cephalotes, Oliv. Ent. iii. 1795, no. 53 *bis*, pl. i. fig. 3 (♂).

This type has already been stated by Dr. C. J. Gahan (Ann. & Mag. Nat. Hist. (8) ii. 1908, p. 201) to be the ♀ of an African species probably identical with *Horia cephalotes*, Oliv., *H. senegalensis*, Cast., and *Cissites macrognatha*, Fairm. Indeed, it is doubtful whether any of the so-called species of *Cissites* described from Africa is more than a form, with greater or less development of the head, of the one species; this development varies greatly even in a series from the same locality. (N.B.—*C. nitida*, Gah., of Borchmann's Catalogue belongs not to *Cissites* but to *Horia*, as stated by its describer.)

When defining the genus *Horia* (Mant. i. 1787, p. 164), Fabricius had before him an insect from Tranquebar sent

him by Hübner (*vide* Naturforscher, xxiv. 1789, pp. 47–48). This he described as the ♂ of his earlier *L. testaceum* (1781), of whose country of origin he was ignorant, but as Dr. Gahan points out (*loc. cit.*) in this synonymy he was at fault. Dr. Gahan contends that the name *testacea*, Fab., for the type of *Horia* is invalid, but I think it may be fairly argued that the type of *Horia testacea* (1787) was the ♂ insect from Tranquebar, not the Banksian insect, and that, the types being distinct, the validity of the name is not affected by their supposed specific identity.

Olivier's figure of the ♀ of *Horia testacea*, Fab., in reality represents the ♀ of *Cissites testacea*, and is probably taken from the Banksian type. Singularly enough, he describes and figures next to it the ♂ of the same species as new (*H. cephalotes*).

The references to the literature of these two species, given by Borchmann in Junk's Coleopt. Catal. pars 69, 1917, are much confused; they should be distributed as follows :—

Horia testacea, Fab. Mant. Ins. i. 1787, p. 164; Ent. Syst. i. 2, 1792, p. 91; Syst. Eleuth. ii. 1801, p. 86.—Hübner, Naturforsch. xxiv. 1789, p. 47, t. 2. ff. 14–17.—Oliv. Ent. iii. 1795, no. 53 *bis*, p. 4, t. i. f. 2 *b*.—Guér. Icon. règne amin. Ins. 1829–44, t. 34. f. 10.—Sturm, Katal. 1826, p. 71, t. iii. f. 25.—Lap. Hist. Nat. Ins. ii. 1840, p. 280.—Gahan, Ann. & Mag. Nat. Hist. (8) ii. 1908, p. 203.—Wellm. Canad. Ent. xlii. 1910, p. 392. ? *sanguinolenta* *, Schröter, Abhandl. i. 1776, p. 364, t. 3, f. 6. Tranquebar.

Cissites testacea, Fab. Spec. Ins. i. 1781, p. 256.—Oliv. Ent. iii. 1795, no. 53 *bis*, t. i. f. 2 *a* (♀).—De Borre, C. Rend. Soc. Ent. Belge, 1883, pp. 136–138, fig. (♂).—Gahan, Ann. & Mag. Nat. Hist. (8) ii. 1908, p. 204. Africa.

Family **Mordellidæ**.

23. *Mordella octopunctata*.

M. 8-punctata, Fab. Syst. Ent. p. 263. In America septentrionali.

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* *sanguinolenta*, Schröter, given by Borchmann as a synonym of *Cissites testacea*, has nothing to do with this species. The insect intended is evidently a species of *Horia*, said to originate from Surinam. Whatever be the species described, the name has no standing, as the author was merely comparing his insect with *Cantharis sanguinolenta*, Linn., and deliberately refrained from giving it a name (see Schröter, *loc. cit.* p. 323).

Family Rhipiphoridæ.

24. *Macrosiagon sexmaculatum.*

Mordella sexmaculata, Fab. Syst. Ent. 1775, p. 263. America.
Ripiphorus 6-maculatus, Fab. Ent. Syst. i. 2, 1792, p. 111.

At the second reference cited the type is stated to be in the Banks Collection, though no specimen now exists there. The species is described with no reference to any earlier work, but the description is almost word for word the same as that of *Mordella 6-maculata* (1775), where the type is stated to be in Dr. Hunter's Collection ; this is now in the Glasgow University Museum.

The species has been placed by Horn and subsequent writers as a synonym of *Macrosiagon pectinatum*, Fab. (1775, *Mordella*), described immediately before it (Mus. Dom. Drury).

Family Tenebrionidæ.

25. *Hoplocephala cornigera.*

Hispa cornigera, Fab. Spec. Ins. i. 1781, p. 82. Anglia.

This type was overlooked by me in my notes on the types of this family.

The locality given by Fabricius and copied by Olivier (Ent. iii. 1795, no. 55, p. 7) is erroneous, a mistake that caused Castelnau and Brullé to express doubt whether the species described by them under this name from Cuba (Ann. Sci. Nat. xxiii. p. 342) was identical with that of Olivier. They do not appear to have noted that the error arose with Fabricius himself.

The following species, placed originally by Fabricius in the Heteromerous genus *Cistela*, belong in reality to other families. Some of them were removed from *Cistela* by Fabricius himself in his later works, others have been recognised and correctly placed by later writers, but some I have not been able to trace in Gemminger and Harold's or Junk's Catalogues :—

Family Dascillidæ.

1. *Microcara livida.*

Cistela livida, Fab. Syst. Ent. 1775, p. 116. Tierra del Fuego.
Atopa livida, Fab. Syst. Eleuth. ii. 1801, p. 16.
Dascillus lividus, Fab., G. & H. Cat. p. 1615.
Dascillus lividus, Fab., Pic in Junk's Cat. pars 58, p. 13.

The species is omitted from Enderlein's list of the insects of Tierra del Fuego. A specimen obtained by Charles Darwin on the voyage of the 'Beagle' agrees well with the type, and as it is in much better preservation the following notes are made upon it :—

Similar to, but rather larger than, the European *M. testacea*, more ovate, more gradually narrowed in front and behind, the thorax being arcuately narrowed from base to apex. The third joint of the antennæ is about as long as the second and considerably more slender; the first joint testaceous, the rest fuscous with apex testaceous; underside fulvous, each abdominal segment except the last with a pair of round dark spots near the median line and a larger dark patch on each side towards the lateral margin. Length $6\frac{1}{2}$ mm.

Microcara fuegensis, Bourg., is evidently different, being smaller ($4\frac{1}{2}$–5 mm.), glabrous, wanting the dark spots on the ventral segments, etc.

Family Silphidæ.

2. *Choleva angustata.*

Cistela angustata, Fab. Spec. Ins. i. 1781, p. 148. Anglia.

This appears to be the *C. sturmi*, Bris., of Continental entomologists.

Family Melyridæ.

3. *Hedybius aulicus.*

Cistela aulica, Fab. Spec. Ins. i. 1781, p. 148. Cap. bon. Spei.

4. *Hedybius hirtus.*

Cistela hirta, Fab. *loc. cit.* Cap. bon. Spei.

The types of both these species are ♀ and in poor preservation. I am not at present able to identify either of them with any of the described species of *Hedybius*, or to trace the names in modern Catalogues.

Family Galerucidæ.

5. *Apophylia festiva.*

Cistela festiva, Fab. *loc. cit.* Cap. bon. Spei.
Apophylia elegantula, Jac. Entom. xxiv. 1891, Suppl. p. 39.

6. *Megalognatha sexlineata.*

Cistela 6-lineata, Fab. *loc. cit.* Habitat ——.
Cneorane sexlineata, Fab., Gemm. & Har. Cat.
Megalognatha bohemanni, Baly.

7. *Diabrotica melanocephala.*

Cistela melanocephala, Fab. Syst. Ent. 1775, p. 118. Amer. Septentr.
Crioceris vittata, Fab. *op. cit.* p. 122. Carolina.
Diabrotica vittata, Fab., Gemm. & Har. Cat.

The identity of *Cistela melanocephala* with *Crioceris vittata* is admitted by Fabricius himself in his later works (Ent. Syst. i. 2, 1792, p. 12), and the name *Crioceris melanocephala* is employed for another species (*op. cit.* p. 3). The type of *C. vittata* is said to be in Mus. Dom. Monson.

XXII.—*A Revision of the African Cichlid Fishes of the Genus* Tylochromis. By C. Tate Regan, M.A., F.R.S.

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Tylochromis, Regan.

Supra, p. 34.

Body deep, compressed ; scales cycloid or feebly denticulate ; two lateral lines, upper ending below soft dorsal, lower extending far forward, ending behind in three branches on caudal fin. Mouth rather small, terminal, with the lower jaw not prominent ; maxillary sheathed by the deep præorbital, slightly exposed distally ; præmaxillary processes rather long, usually reaching frontals. Teeth in jaws small, conical, in two to five series, outer sometimes enlarged. Lower pharyngeals united by interlocking suture to form a triangular plate, with slender, pointed, uni- or bicuspid teeth at least near the posterior angles, and with enlarged, rounded, flat teeth in the middle at least posteriorly. Dorsal XIII–XVI 12–17 ; spines slender or moderate. Anal III 7–9 ; spines strong. Pectoral long, pointed. Caudal scaly, truncate or emarginate.

Occipital crest very strong, extending to anterior margin of frontals ; parietal crests ending above middle of orbits near the orbital margin ; postorbital part of skull short and deep, with lower edge of basioccipital very oblique ; pharyngeal apophysis strong, formed by parasphenoid only, ending in a broadly ovate or subtriangular articular surface, narrowed